10/783,339 <u>PATENT</u>

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

plicant:

SMIDT ET AL.

Examiner:

J. PAHNG

Serial No.:

10/783,339

Group Art Unit:

3725

Filed:

FEBRUARY 20, 2004

Docket No.:

10646.399US01

Title:

APPARATUS AND METHOD FOR SUPPORTING A REMOVABLE

ANVIL

CERTIFICATE UNDER 37 CFR 1.8:

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to: Mail Stop Appeal Brief-Patents, Commissioner for Patents, P.O. Box

Kristine A. Wacek

APPEAL BRIEF

Mail Stop Appeal Brief-Patents Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450

PATENT TRADEMARK OFFICE

Dear Sir:

This Brief is presented in support of the Notice of Appeal, filed July 16, 2007, concerning the final rejection of claims 12 and 28 of the above-identified application, as set forth in the final Office Action mailed May 17, 2007.

A check for \$500.00 to cover the required fee for filing this Brief is enclosed. Please charge any additional fees or credit overpayment to Merchant & Gould Deposit Account No. 13-2725.

Applicants reserve the right to an oral hearing. A separate request for oral hearing with the appropriate fee will be filed within two months of the Examiner's Answer.

10/10/2007 EAYALEW1 00000021 10783339

01 FC:1402

510.00 OP

TABLE OF CONTENTS

Section	<u>Title</u>	<u>Page</u>
I	Real Party of Interest	3
II	Related Appeals and Interferences	4
III	Status of Claims	5
IV	Status of Amendments	6
V	Summary of the Claimed Subject Matter	7
VI	Grounds of Rejection to be Reviewed on Appeal	9
VII	Argument	10
VIII	Claims Appendix	15
IX	Evidence Appendix	16
X	Related Proceedings Appendix	17

I. REAL PARTY IN INTEREST

The real party in interest is Vermeer Manufacturing Company, located in Pella, Iowa, the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

Claim 12-17, 28-35 and 37-46 are currently pending.

Claims 12-17, 28-35 and 37 are currently rejected.

Claims 38-46 are currently withdrawn.

Claims 1-11, 18-27, and 36 have been cancelled.

The rejection of claims 12 and 28 is being appealed.

IV. STATUS OF AMENDMENTS

No amendments subsequent to the Final Office Action of May 17, 2007 have been filed.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent Claim 12 concerns a grinding machine (100, FIG. 1) having a mill box (150), a grinding drum (160), and an anvil (500, FIG. 3). The anvil (500) is positioned within apertures (304, FIG. 7) defined by sides (300) of the mill box (150) and has a length greater than the grinding width of the mill box (FIG. 5). (See specification page 9 at lines 22-26.) The anvil (500) further has a cross-section (FIG. 9) that includes a wedge-shaped portion (524) and a rectangular portion (514). (See specification page 8 at lines 5 and 24.) The wedge-shaped portion (524) has a tapering surface (502) extending from a first reference point (508) to a second reference point (506). (See specification page 8 at lines 7- 10 and page 7 at line 23.) The second reference point (506) of the tapering surface (502) is located a distance farther from the axis of rotation of the grinding drum (160) than the first reference point (508) (See FIG. 3, and specification page 7 at lines 22-24 and page 8 at line 10-11, generally.) The tapering surface (502) of the anvil (500) is oriented such that the first and second reference points (508, 506) are horizontally aligned with one another. (See FIG. 3 and specification page 8 at line 21.)

Independent Claim 28 concerns a grinding machine (100, FIG. 1) having a mill box (150), a grinding drum (160), and an anvil (500, FIG. 3). The anvil (500) is positioned within the apertures (304, FIG. 7) defined by sides (300) of the mill box (150) and has a length greater than the grinding width of the mill box (FIG. 5). (See specification page 9 at lines 22-26.) The anvil further has a solid construction (specification, page 9 at lines 8-10) defining a cross-section (FIG. 9) with a wedge portion (524) and a rectangular portion (514). (See specification page 9 at lines 8-10 and page 8 at lines 5 and 24.) The wedge portion (524) is defined by a tapering surface (502). (See specification page 8 at lines 7-10.) During operation (FIG. 3), the tapering surface (502) of the wedge portion (524) is oriented perpendicular to vertical impact forces generated by the grinding drum (160). (See specification page 5 at lines 27-29. Further, while FIG. 3 shows a non-perpendicular shearing force 510 generated by the particular position of the corresponding cutter 164, it is understood by those skilled in the art that when the cutter is rotationally oriented to produce a vertical shearing force, the anvil surface 502 is perpendicular

to such vertical impact forces; in the alternative, the anvil surface 502 is perpendicular to the "vertical" components of the shearing force 512 shown.)

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether claims 12 and 28 are anticipated under 35 U.S.C. §102(b) by Verhoef et al. (U.S. Patent 6,843,435).

VII. ARGUMENT

1. Concerning whether claims 12 and 28 are anticipated under 35 U.S.C. §102(b) by Verhoef et al. (U.S. Patent 6,843,435).

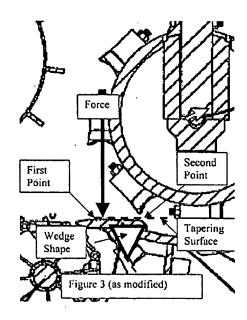
A. Claim 12

Claim 12 recites a grinding machine including a mill box, a grinding drum, and an anvil. The anvil has a cross-section including a wedge-shaped portion and a rectangular portion. The wedge-shaped portion has a tapering surface extending from a first reference point to a second reference point. The tapering surface is oriented such that the first and second reference points are horizontally aligned with one another.

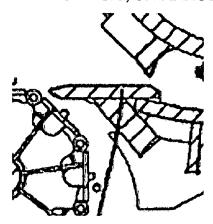
1. Improper characterization of the disclosure of Verhoef

Verhoef discloses a grinder including a mill box 150 and an anvil 182. The Office Action asserts that the anvil of Verhoef has a wedge-shaped portion and a rectangular portion. The Examiner provided the below annotated FIG. 3 of Verhoef to clarify what portions of the anvil 182 are being characterized as a wedge shape and a rectangle. In the annotated FIG. 3, the Examiner has drawn in a triangle to depict the characterization of a wedge-shaped anvil portion.

EXAMINER'S ANNOTATED FIG. 3



DETAIL VIEW OF FIG. 3, UN-ANNOTATED



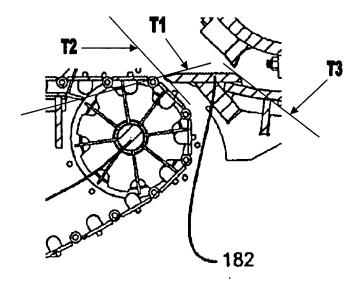
With reference to above un-annotated view of FIG. 3, it is respectfully submitted that the Examiner is partitioning the anvil 182 in a way that is clearly not disclosed in Verhoef. In fact, the Examiner appears to have partitioned a rectangular portion of the anvil 182, incorporated that partitioned rectangular portion into the Examiner's drawn-in triangle, and further extended the drawn-in triangle to a non-cross-sectional region located below the anvil 182.

Claim 12 specifically recites that the wedge-shaped portion and the rectangular portion of the anvil are part of the anvil's cross-section. The Examiner's drawn-in triangle appears to incorporate a spatial region located beneath the anvil that is not part of the anvil's cross-section. In the alternative, the Examiner is merely partitioning the anvil 182 in a manner that is not disclosed by Verhoef to properly support an anticipation rejection.

2. Orientation of tapering surface not disclosed in Verhoef

With that, claim 12 requires that the wedge-shaped portion of the anvil's cross-section have a tapering surface that extends between two reference points; and that the two reference points be horizontally aligned with one another. In contrast to the Examiner's characterization of the anvil portions, Applicants respectfully note that the anvil 182 of Verhoef does include tapering surfaces (T1, T2, and T3 added to Applicant's below annotated FIG. 3).

APPLICANT'S ANNOTATED FIG. 3



None of the tapering surfaces (T1, T2, T3) is horizontal; accordingly, there are no two reference points of a tapering surface that are horizontally aligned, as required by claim 12.

To proper establish an anticipation rejection, each and every limitation much be disclosed in the reference. That is, the identical invention must be shown in as complete detail as is contained in the claims, including the arrangement of elements as required by the claims. MPEP 2131. At least because Verhoef fails to disclose the recited orientation of a tapering surface of a wedge-shaped portion of the anvil, Applicants respectfully submit that independent claim 12 is not anticipated by Verhoef.

B. Claim 28

Claim 28 recites a grinding machine including a mill box, a grinding drum, and an anvil. The anvil is a solid construction defining a cross-section that includes a wedge portion and a rectangular portion. The wedge portion is defined by a tapering surface. During operation of the

grinding machine, the tapering surface of the wedge portion is oriented perpendicular to vertical impact forces generated by the grinding drum.

1. Improper characterization of the disclosure of Verhoef

As previously discussed, Verhoef discloses a grinder including a mill box 150 and an anvil 182. The Office Action asserts that the anvil of Verhoef has a wedge portion and a rectangular portion. The Examiner provided the above annotated FIG. 3 of Verhoef (on page 10 of this paper) to clarify what portions of the anvil 182 are being characterized as a wedge and a rectangle.

With reference to above un-annotated view of FIG. 3 (on page 11 of this paper), it is respectfully submitted that the Examiner is partitioning the anvil 182 in a way that is clearly not disclosed in Verhoef. In fact, the Examiner appears to have partitioned a rectangular portion of the anvil 182, incorporated that partitioned rectangular portion into the Examiner's drawn-in triangle, and further extended the drawn-in triangle into a non-cross-sectional region located below the anvil 182.

Claim 28 specifically recites that the wedge portion and the rectangular portion of the recited anvil are part of the anvil's cross-section. The Examiner's drawn-in triangle appears to incorporate a spatial region located beneath the anvil that is not part of the anvil's cross-section. In the alternative, the Examiner is merely partitioning the anvil 182 in a manner that is not disclosed by Verhoef to properly support an anticipation rejection.

2. Orientation of tapering surface not disclosed in Verhoef

With that, claim 28 requires that the tapering surface of the wedge portion of the anvil's cross-section be oriented perpendicular to vertical impact forces generated by the grinding drum. Referring to Applicant's above annotated FIG. 3 (on page 12 of this paper), it is respectfully noted that none of the tapering surfaces (T1, T2, T3) is perpendicular to a <u>vertical</u> force generated by the drum.

To proper establish an anticipation rejection, each and every limitation much be disclosed in the reference. That is, the identical invention must be shown in as complete detail as is contained in the claims, including the arrangement of elements as required by the claims. MPEP 2131. At least

because Verhoef fails to disclose the recited orientation of a tapering surface of a wedge portion of the anvil, Applicants respectfully submit that independent claim 28 is not anticipated by Verhoef.

In summary, it is earnestly requested that the Examiner's rejection of claim 12 and 28 be reversed, and that these claims be allowed.

Respectfully submitted,

MERCHANT & GOULD P.C. P.O. Box 2903 Minneapolis, Minnesota 55402-0903 (612) 332-5300

Date: 8 5 2007

Karen A. Fitzsimmons

Reg. No. 50,470 KAF:PLSkaw

VIII. CLAIMS APPENDIX

12. A grinding machine, comprising:

- a) a mill box having opposite sides, the opposite sides of the mill box defining a grinding width, each of the sides defining an aperture;
- b) a grinding drum positioned within the mill box, the grinding drum having an axis of rotation;
- c) an anvil having a cross-section, the cross-section including a wedge-shaped portion and a rectangular portion, the wedge-shaped portion having a tapering surface extending from a first reference point to a second reference point, each of the first and second reference points being located a distance from the axis of rotation of the grinding drum, the second reference point of the tapering surface being located farther from the axis of rotation than the first reference point, the anvil being positioned within the apertures of each of the sides of the mill box, the anvil having a length greater than the grinding width of the mill box such that ends of the anvil extend beyond the sides of the mill box;
- d) wherein the tapering surface of the anvil is oriented such that the first and second reference points are horizontally aligned with one another.

28. A grinding machine, comprising:

- a) a mill box having opposite sides, the opposite sides of the mill box defining a grinding width, each of the sides defining an aperture;
 - b) a grinding drum positioned within the mill box;
- c) an anvil having a solid construction that defines a cross-section, the cross-section including a wedge portion and a rectangular portion, the wedge portion being defined by a tapering surface, the anvil being located in relation to the grinding drum such that during operation the tapering surface of the wedge portion is oriented perpendicular to vertical impact forces generated by the grinding drum, the anvil being positioned within the apertures of each of the sides of the mill box, the anvil having a length greater than the grinding width of the mill box such that ends of the anvil extend beyond the sides of the mill box.

IX. EVIDENCE APPENDIX

1. OFFICE ACTIONS AND AMENDMENTS/RESPONSES

a. Final Office Action -- mailed May 17, 2007

2. REFERENCES RELIED UPON BY THE EXAMINER

a. U.S. Patent No. 6,843,435 issued to Verhoef et al.

The above items are attached and labeled accordingly as Exhibits.

X. RELATED PROCEEDINGS APPENDIX

None.



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.usplo.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
10/783,339	02/20/2004	Brian Smidt	10646.399US01 √	6914	
Merchant & Go	7590 05/17/2007		EXAM	INER	
P.O. Box 2903		KAF	PAHNG,	PAHNG, JASON Y	
Minneapolis, MN 55402-0903		Kur	ART UNIT	PAPER NUMBER	
FR2Mo: Ju	ly 17,2007 - c/p lgust 17,2007 wember 17,2007		3725		
FR340/PTAI AN	19ust 17,2007				
FREdworth: No	wenter 17, 2007		MAIL DATE	DELIVERY MODE	
	₩ N		05/17/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

EXHIBIT

Lagrange / a

	Application No.	Applicant(s)
	10/783,339	SMIDT ET AL.
Office Action Summary	Examiner	Art Unit
	Jason Y. Pahng	3725
The MAILING DATE of this communication app Period for Reply	ears on the cover sheet with the o	correspondence address
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DA - Extensions of time may be available under the provisions of 37 CFR 1.13 after SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period was Failure to reply within the set or extended period for reply will, by statute, Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 16(a). In no event, however, may a reply be tiruly apply and will expire SIX (6) MONTHS from cause the application to become ABANDONE	N. nely filed the mailing date of this communication. ED (35 U.S.C. § 133).
Status		
1) Responsive to communication(s) filed on <u>08 Mar</u> 2a) This action is FINAL . 2b) This 3) Since this application is in condition for allowant closed in accordance with the practice under Expression in the practice of	action is non-final. nce except for formal matters, pro	
Disposition of Claims		
4) Claim(s) 12-17,28-35 and 37-46 is/are pending 4a) Of the above claim(s) 38-46 is/are withdraw 5) Claim(s) is/are allowed. 6) Claim(s) 12-17,28-35 and 37 is/are rejected. 7) Claim(s) is/are objected to. 8) Claim(s) are subject to restriction and/or	n from consideration.	
Application Papers		
9) The specification is objected to by the Examiner 10) The drawing(s) filed on is/are: a) access applicant may not request that any objection to the of Replacement drawing sheet(s) including the correction of the oath or declaration is objected to by the Examiner	epted or b) objected to by the drawing(s) be held in abeyance. See on is required if the drawing(s) is ob	e 37 CFR 1.85(a). jected to. See 37 CFR 1.121(d).
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of: 1. Certified copies of the priority documents 2. Certified copies of the priority documents 3. Copies of the certified copies of the priori application from the International Bureau * See the attached detailed Office action for a list of	have been received. have been received in Applications to the comments have been received (PCT Rule 17.2(a)).	on No ed in this National Stage
Attachment(s) 1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date	4) Interview Summary Paper No(s)/Mail Da 5) Notice of Informal P 6) Other:	ate

DETAILED ACTION

Election/Restrictions

Newly submitted claims 38-46 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Note that claims 38-46 belong to a distinct combination group including a feed table.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 38-46 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 12, 13, 15-17, 28, 31-35, and 37 are rejected under 35 U.S.C. 102(b) as being anticipated by Verhoef et al. (US 6,843,435).

With regard to claim 12, Verhoef discloses a grinding machine with substantially all of the claimed structure including:

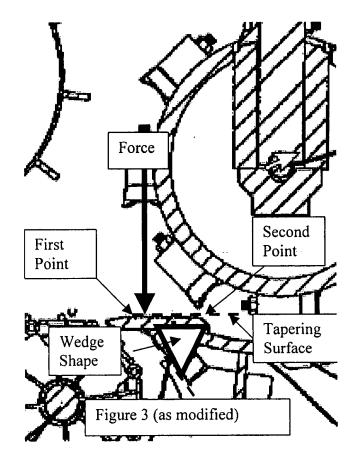
Application/Control Number: 10/783,339 Page 3

Art Unit: 3725

a grinding drum (160) positioned within a mill box (154) having opposite sides
 (155);

- 2. the grinding drum (160) having an axis of rotation (axis of 171);
- 3. an anvil (182) having a cross-section, the cross-section including a wedge-shaped portion and a rectangular portion (Figure 3);
- the wedge-shaped (182) portion having a tapering surface extending from a first reference point (closest to 171) to a second reference point (farthest from 171);
- 5. the ends of the anvil (182) extending beyond (Figure 5a) the sides (155) of the mill box (154); and
- the first and second reference points are horizontally aligned with one another.

Art Unit: 3725



With regard to claims 13, 28, 34, and 37, Verhoef discloses an anvil (182) of solid construction (Figure 3) without weakening structure. The top tapering surface of the wedge portion is oriented perpendicular to vertical impact perpendicular forces generated by the grinding drum as shown above in Figure 3 (as modified). In fact, Verhoef's discloses generated force as shown in Applicant's Figure 3.

With regard to claims 15-17 and 31-33, Verhoef discloses a mounting arrangement including a first support surface configured to support an end of a feed table (112) and a second support surface configured to support the anvil (182) from the outside of the mill box (154). See Figure 1.

Art Unit: 3725

With regard to claim 35, Verhoef discloses that a portion of the distance between the first reference point (closest to 171) and the axis of rotation (171) defines a minimum clearance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 14 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verhoef et al. (US 6,843,435) in view of Zehr (US 2002/0056773). The claims call for clamp arms (60) to secure the ends of the anvil when positioned within the apertures (Figure 3). In a closely related art, Zehr discloses a grinding machine with clamp arms (60) in order to secure the ends of the anvil when positioned within the apertures so that the anvil may be removed. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Verhoef with clamp arms in order to secure the ends of the anvil when positioned within the apertures so that the anvil may be removed, as taught by Zehr.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Verhoef et al. (US 6,843,435) in view of Hadjinian et al. (US 5,881,959). The claim calls for a shape of the anvil to be such that a minimum clearance is defined between the rectangular portion and the drum. In a closely related art, Hadjinian discloses a grinding

Art Unit: 3725

machine with a shape of the anvil to be such that a minimum clearance is defined between the rectangular portion (17) and the drum (18) in order to resist deflection (Figure 6). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to provide Verhoef with a shape of the anvil to be such that a minimum clearance is defined between the rectangular portion and the drum in order to resist deflection, as taught by Hadjinian.

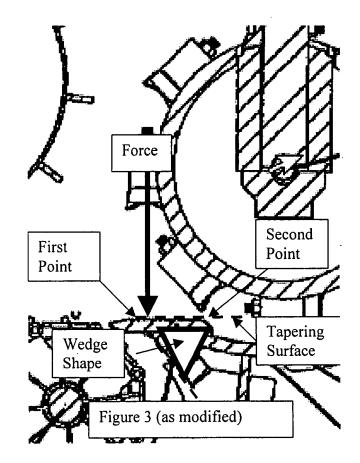
Response to Arguments

Applicant's arguments filed March 8, 2007 have been fully considered but they are not persuasive.

With regard to claims 12, 13, 15-17, 28, 31-35, and 37, Applicant argues that Verhoef does not disclose a horizontal tapering surface. This is not persuasive.

Verhoef discloses a horizontal tapering surface as shown below in a modified Figure 3.

Art Unit: 3725



With regard to claims 12, 13, 15-17, 28, 31-35, and 37, Applicant also argues that Verhoef does not disclose an anvil including a wedge shaped portion. This is also not persuasive. Verhoef discloses an anvil including a wedge shaped portion as shown above in a modified Figure 3. Also, it is pointed out that Applicant does not disclose an exact wedge shaped portion. See Applicant's Figure 9. Applicant merely discloses a portion similar to a wedge-shaped portion.

With regard to claim 28, Verhoef's discloses a generated force as shown in Applicant's Figure 3.

With regard to claim 14, Applicant argues that Zehr does not disclose clamping arms. This is not persuasive. Zehr discloses a grinding machine with clamp arms (60)

Art Unit: 3725

in order to secure the ends of the anvil when positioned within the apertures so that the anvil may be removed

Applicant does not present any new additional arguments regarding the rest of the claims.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Y. Pahng whose telephone number is 571 272 4522. The examiner can normally be reached on 9:30 AM - 8:00 PM, Monday-Thursday.

Art Unit: 3725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Banks H. Derris can be reached on 571 272 4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JYP

DERRIS H. BANKS SUPERVISORY PATENT EXAMINER TECHNOLOGY CENTER 3700